Dear reviewer #2,

Thank you very much for your careful reading of the paper. We have fixed the typos and the concerns you have raised. Below please find our responses to your comments (in blue).

Major Comments

1. Reply is fine. However, you may add in the manuscript more words of your reply, such as "As the source extent grows ..... intensity does not vary with distance.".
We have added the above sentence at the end of Section 2 as you suggested.

2. (a) Reply is fine.

(b) Reply is fine. However, there are typos.
Page 22, Line 9: depolarization ---> dipolarization
Page 22, Line 13: Luis, 1996 ---> Lui, 1996
Typos are fixed.

3. Reply is not enough. Don't O+ ions gain more energy than H+ ions in the ring current region according to the CRCM model? Is the O+/H+ energy density ratio in the ring current predominantly controlled by that in the plasma sheet? If a few more sentences are added in the manuscript, it would enhance scientific significance of the manuscript and help readers to understand Figure 9.
It is true that O+ ions gain more energy than H+ ions in the ring current. This is because more O+ ions getting in and more are accelerated. As a result, the gain is still controlled by the boundary condition, which is controlled by the plasma sheet. We have added 2 two sentences at the end of page 18 to discuss this.

Minor Comments

1. Though the authors replied "We have added, in the revised manuscript, a statement (page 4, line 3-5) to explain this.", no such statement is added.
Sentence added on page 4, line 3-5.

2. Reply is fine.

3. Reply is fine.

4. Not fixed yet. (No paper by Delcourt [2000] appeared in references.)
Sorry, typo again. It should read Delcourt [2002].

Thanks again for your valuable comments. We hope the revised manuscript is acceptable to you.